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CITY OF



LINCOLN.

URBAN SANITARY AUTHORITY


ANNUAL REPORT

— OF —

THE MEDICAL OFFICER OF HEALTH,

For the Year 1920.

Lincoln:
LINCOLNSHIRE CHRONICLE, LTD., PRINTERS, SALTERGATE.



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SANITARY STAFF (Chief Officials).

December, 1920.



Medical Officer of Health :

C. J. COLEMAN, M.D., M.A., D.P.H.

Assistant Medical Officer of Health :

M. L. BERY, M.B., Ch.B.

Public Analyst :

E. M. CHAPLIN, Ph.D., F.I.C.

Chief Sanitary Inspector :

J. K. CRAWSHAW, M.B.E., CERT. S.I.A.

Special Inspector for Food and Slaughter-Houses, &c.

C. STREET, C.R.S.I., C.M.I.

Assistant Sanitary Inspectors.

A. GARNER, C.R.S.I.

H. HOE, C.R.S.I.

Superintendent of Health Visitors :

Miss E. M. DAVIES (Trained Nurse), C.R.S.I., C.M.B.

Phthisis Nurses :

Nurse A. WOOD.

Nurse M. SENDALL.

Matron of the City Hospital and Sanatorium :

Miss E. O'KANE,

HEALTH DEPARTMENT,
CORPORATION OFFICES,
LINCOLN.

July, 1921.

MR. MAYOR AND GENTLEMEN,

I have the honour to submit to you my report on the health and sanitary conditions of Lincoln during 1920.

The most important event, during the past year, has been the extension of the City Boundary to include Bracebridge, Boultham and part of the Branston Rural District Council. This has thrown further responsibilities upon the staff of the Health Department, and very considerably increased the area under supervision.

The re-organisation of the Health Office has been temporarily postponed, in view of the present financial depression, but it is hoped that matters will be put upon a more satisfactory basis in the not distant future.

During the year, the death occurred of Dr. Charles Harrison, who for many years had served the City faithfully as Medical Officer of Health, and who on his retirement in 1910 was appointed Consulting Medical Officer.

Mr. J. K. Crawshaw returned to his duties as Chief Sanitary Inspector, when he was released from the Food Control on 8th November, 1920.

I would like to add a word of appreciation for the willing assistance of all my staff during the past year.

I remain, Gentlemen,

Your obedient Servant,

C. J. COLEMAN,

CITY OF LINCOLN.

STATISTICAL SUMMARY FOR 1920.

Population at Census, 1911	57,285
Estimated Population by Registrar-General to middle of 1920	For B.R. 63,880 For D.R. 63,655
Area of Municipal Borough (acres)	6,166
Average Number of persons per acre	10.3
Birth-rate per 1,000 Population, 1920	22.7
Death-rate, 1920, per 1,000	11.5
Infantile Mortality, per 1,000 Births	79.0
Zymotic Death-rate (exclusive of Influenza), per 1,000	1.05
Phthisis Death-rate, per 1,000 ... ..	.72
Respiratory Diseases Death-rate, per 1,000	1.90
Malignant Diseases Death-rate, per 1,000 ... ..	.97

NATURAL AND SOCIOLOGICAL CONDITIONS OF THE DISTRICT.

THE AREA OF THE MUNICIPAL BOROUGH is now 6,166 acres, and is divided into North and South Districts by the River Witham. The district to the south of the river is flat, the soil consisting of river alluvium, gravel and sand

It may be noted that the whole of the additional Districts now included in the City is low-lying ground in the river basin. To the north the land rises to a considerable eminence, on which the Cathedral stands; this is the northern escarpment of the Lincoln Gap. To the south, the Canwick Hill forms the southern escarpment, and the valley through which the river flows towards the Wash is the gap formed by the prehistoric Trent. The geological formation of the hills to the north and the south is oolitic limestone. The slope of the northern hill as it descends to the river is mostly covered with clay.

POPULATION.

Census of 1871	...	...	26,766
do. 1881	...	...	37,312
do. 1891	...	...	41,491
do. 1901	...	...	48,784
do. 1911	...	...	57,285

Estimated population by Registrar-General at the middle of 1920: For Birth-rate 63,880. For Death-rate 63,655.

The estimate of the population for 1920 is made by the Registrar-General, who averages the population for the year, in view of the extension of the Boundaries which occurred during this period.

He gives a population of 67,543 for the increased City Boundary as from 9th November, 1920.

It will be noticed that as in former years (for reasons already explained) a slightly different figure is given for the Birth-rate as compared with Death-rate, but this should be unnecessary in the future.

Employment.

The staple employment of Lincoln is furnished by the large iron foundries situate near the river bank to the south of the City. According to the figures by the 1911 Census 19,928 males were engaged in various occupations, and of this number no less than 9,576 (i.e., nearly half) were engaged in engineering, machine, and miscellaneous metal trades. 1,741 were employed in various branches of the building trade. This number was greatly increased during the war.

Before the War there were no manufactories in which women were employed to any large extent. Out of a total of 5,692 employed females at the last Census 2,434 (somewhat less than half) were engaged in various forms of domestic service. The total of employed females was greatly increased during the war by women doing munition work.

I am informed by the Relieving Officer that £13,786 was expended in Poor Law out-relief during the financial year, March, 1920—March, 1921.

Medical relief is afforded by the County Hospital and Dispensary, which are on a voluntary basis, the Poor Law Infirmary and the City Hospital for Infectious Diseases and Tuberculosis.

Excellent work has been done by the Voluntary Institutions during the past year.

It is regrettable that the financial burdens of our County Hospital have been so seriously increased as the result of post-war conditions.

Vital Statistics.

DEATHS.

During the year 800 deaths were registered; these divided into sexes for each quarter are :—

	M.	F.	Total.
1st quarter	133	108	241
2nd ,,	121	94	215
3rd ,,	81	63	144
4th ,,	105	95	200
	<hr/>	<hr/>	<hr/>
	440	360	800
	<hr/>	<hr/>	<hr/>

The total compares with previous years as follows:—

1906	...	...	877	1913	...	...	772
1907	...	...	807	1914	...	...	804
1908	...	...	767	1915	...	...	929
1909	...	...	775	1916	...	...	868
1910	...	...	782	1917	...	...	878
1911	...	...	874	1918	...	...	1,149
1912	...	...	797	1919	...	...	856
				1920	...	...	800

Fifty-three persons died in the Workhouse, 114 in the County Hospital, 18 in the City Hospital, 5 in the Lawn Asylum, 8 in the Red House Nursing Home, 3 in the New Barracks, 6 in private nursing homes, 1 in H.M. Prison, and 3 in the Maternity Home.

The Registrar-General now sends particulars of deaths of Lincoln residents who die elsewhere, but whose deaths must be added to the total of deaths registered locally; he also gives the number of people who have died in Lincoln during the year, but who are not residents in the locality, and this number must be subtracted from the total number of local deaths. I have, therefore, added 39 deaths to the total of 800, and subtracted 107 deaths. This leaves 732 deaths of Lincoln residents for the year 1920, which forms the basis for my future analysis.

As the deaths of Lincoln residents in 1920 were 732, and the population at the middle of the year as regards death rate is estimated at 63,655, the death-rate per 1,000 of the population is 11.5.

As regards the usual Zymotic diseases the death-rate was 1.05 per 1,000. There has been an appreciable decline in the death rate from Phthisis.

	1917.	1918.	1919.	1920.
Zymotic Diseases, death rate per 1,000	.12	.68	.38	1.05
Respiratory „ „ „	2.18	2.34	2.40	1.9
Phthisis „ „ „	1.10	.95	.94	.72
Other Tuberculous Diseases „ „	.22	.11	.24	.21
Malignant Diseases „ „	1.10	.95	.94	.97

CAUSES OF, AND AGES AT, DEATH DURING THE YEAR 1920.

CAUSES OF DEATH				Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the district.									Total Deaths whether of residents or non-residents in Institutions in the District
				All Ages	Under 1 year	1 and under 2 y'rs.	2 and under 5 y'rs.	5 and under 15 y'rs.	15 and under 25 y'rs.	25 and under 45 y'rs.	45 and under 65 y'rs.	65 and Upwards	
All Causes	{ Certified .. ..	..	..	724	112	34	26	29	26	95	139	263	..
	{ Uncertified .. ..	..	..	8	5	..	..	..	..	..	2	1	..
1	Enteric Fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..
2	Small Pox .. ..	..	..	..	..	..	..	..	..	..	..	..	..
3	Measles .. ..	..	..	31	6	13	5	7	..	..	..	..	..
4	Scarlet Fever .. ..	..	..	1	..	..	..	1	..	..	..	..	1
5	Whooping Cough .. ..	..	..	18	7	6	5	..	..	..	..	..	..
6	Diphtheria and Croup .. ..	..	..	5	..	..	3	2	..	..	..	..	5
7	Influenza .. ..	..	..	11	1	..	..	..	2	..	2	6	2
8	Erysipelas .. ..	..	..	..	..	..	..	..	..	..	..	..	..
9	Phthisis (P.T.B.) .. ..	..	..	47	..	..	..	2	13	22	6	4	10
10	Tuberculous Meningitis .. ..	..	..	8	1	2	1	3	..	1	..	..	3
11	Other Tuberculous Diseases .. ..	..	..	6	1	1	..	..	..	3	1	..	2
12	Cancer, Malignant Disease .. ..	..	..	62	..	..	..	..	..	5	31	26	25
13	Rheumatic Fever .. ..	..	..	2	..	..	1	..	..	..	1	..	..
14	Meningitis .. ..	..	..	5	..	1	1	..	..	1	1	1	2
15	Organic Heart Disease .. ..	..	..	61	1	..	..	1	1	7	17	34	15
16	Bronchitis .. ..	..	..	62	15	3	1	..	..	1	15	27	7
17	Pneumonia (all forms) .. ..	..	..	53	9	6	3	..	1	14	7	13	10
18	Other Diseases of Respiratory Organs .. ..	..	..	10	..	..	..	1	..	3	3	3	3
19	Diarrhoea and Enteritis .. ..	..	..	11	11	..	..	..	..	..	..	..	..
20	Appendicitis and Typhlitis .. ..	..	..	4	..	..	..	..	1	3	..	..	3
21	Cirrhosis of Liver .. ..	..	..	..	..	..	..	..	..	..	..	..	..
21 ^a	Alcoholism .. ..	..	..	..	..	..	..	..	..	..	..	..	..
22	Nephritis and Bright's Disease .. ..	..	..	14	..	..	..	1	1	4	7	1	7
23	Puerperal Fever .. ..	..	..	2	..	..	..	..	0	2	..	..	..
24	Other Accidents and Diseases of Pregnancy and Parturition .. ..	..	..	6	..	..	..	..	1	5	..	..	2
25	Congenital Debility and Malformation, including Premature Births .. ..	..	..	45	45	..	..	..	..	..	..	..	6
26	Violent Deaths, excluding Suicides .. ..	..	..	16	..	1	2	3	..	2	7	1	11
27	Suicides .. ..	..	..	2	..	..	..	..	..	1	1	..	2
28	Other Defined Diseases .. ..	..	..	191	20	1	4	8	6	21	41	93	87
29	Diseases, Ill-defined and unknown .. ..	..	..	1	..	..	..	..	..	..	1	..	0
30	Senility .. ..	..	..	5	..	..	..	..	..	..	..	55	4
TOTALS				732	117	34	26	29	26	95	141	261	207

INFANTILE MORTALITY.

One hundred and seventeen deaths occurred in Infants under one year of age, giving a mortality of 79 per 1,000 births. Fifty-three deaths occurred within a month of birth.

Premature Birth, Atrophy, Malformation and Debility were responsible for 45 deaths, and form the largest factor in the mortality.

Pneumonia and Bronchitis were responsible for 24 deaths.

As regards Zymotic Diseases, seven deaths were due to Whooping Cough, and 6 deaths to Measles.

INFANT MORTALITY TABLE.

1920. Nett Deaths from stated causes at various Ages under 1 year of age.

CAUSES OF DEATH.				Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	4 weeks and under 3 months.	3 months and under 6 months.	6 months and under 9 months.	9 months and under 12 months.	Total Deaths under 1 year
All causes	{ Certified ..	..	..	27	5	15	3	50	24	10	14	14	112
	{ Uncertified ..	..	..	3	..	..	..	3	..	2	..	..	5
Small-pox .. ..				..	..	..	..	..	..	..	..	..	..
Chicken-pox .. ..				..	..	..	..	..	..	..	..	..	..
Measles .. ..				..	..	..	..	..	..	..	1	5	6
Scarlet Fever .. ..				..	..	..	..	..	..	..	..	..	..
Whooping Cough ..				..	1	1	..	2	2	1	..	2	7
Diphtheria and Croup				..	..	..	..	..	..	..	..	..	..
Erysipelas .. ..				..	..	..	..	..	..	..	..	..	..
Tubercular Meningitis				..	..	..	..	..	..	..	1	..	1
Abdominal Tuberculosis				..	..	..	..	..	..	..	..	..	..
Other Tuberculous Diseases				..	..	..	..	..	..	..	..	1	1
Meningitis (not Tuberculous)				..	..	..	..	..	..	..	..	..	..
Convulsions				1	..	2	..	3	4	2	..	..	9
Laryngitis .. ..				..	..	..	..	..	..	..	..	..	..
Bronchitis .. ..				..	..	..	..	..	3	3	7	2	15
Pneumonia (all forms)				1	..	1	..	2	2	1	1	3	9
Diarrhoea .. ..				..	..	..	..	..	..	..	..	1	1
Enteritis				1	..	2	..	3	5	2	..	..	10
Gastritis .. ..				..	..	..	..	..	..	..	..	..	..
Syphilis .. ..				..	..	..	..	..	2	..	..	..	2
Rickets .. ..				..	..	..	..	..	..	..	..	..	..
Suffocation, overlying				..	..	..	..	..	..	..	..	..	..
Injury at birth ..				..	..	..	..	..	..	..	..	..	..
Atelectasis				3	..	..	..	3	..	..	..	..	3
Congenital Malformations				2	..	1	..	3	..	..	1	..	4
Premature birth ..				20	1	4	1	26	2	..	..	..	28
Atrophy, Debility and				..	..	..	..	..	..	..	..	..	..
Marasmus				2	3	3	..	8	2	..	1	..	11
Other Causes .. ..				..	..	1	2	3	2	3	2	..	10
TOTALS ..				30	5	15	3	53	24	12	14	14	117

Diarrhœa and Gastro-Enteritis caused 11 deaths.

Attempts to reduce Infant Mortality were never more important than in the present crisis, as the future welfare of the nation will depend upon the vitality and numbers of the coming generation.

BIRTHS.

During the year 1920, 1,479 births were registered, of which 91 were illegitimate. These divided into sexes for each quarter of the year, were as follows:—

	Males	Females	Total
1st Quarter	207	195	402
2nd Quarter	181	172	353
3rd Quarter	196	183	379
4th Quarter	189	156	345
Totals	773	706	1,479

The percentage of Illegitimate Births to total Birth Rate is given in the table below for the last six years:—

1915—5.5 per cent.	1918—7.7 per cent.
1916—5.1 „	1919—7.4 „
1917—6.4 „	1920—6.28 „

Information supplied by Registrar-General showed that there were 33 outward transfers and 9 inward, leaving a balance of 24 births to be subtracted. The nett number of births belonging to the City of Lincoln is therefore 1,455. The Birth-rate for the year was 22.7 per 1,000 of the population, calculated on a basis of 63,880, the figure given by Registrar-General.

Comparative Table of Birth-rate, Death-rate and Infantile Mortality as far as ascertainable in 1920:—

	Death-rate per 1,000	Birth-rate per 1,000	Infantile Mortality per 1,000 Births
England and Wales ..	12.4	25.4	80
96 Greater Towns, including London ..	12.5	26.2	85
148 Smaller Towns ..	11.3	24.9	80
London	12.4	26.5	75
Lincoln	11.5	22.7	79

VITAL STATISTICS OF WHOLE DISTRICT DURING 1920 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Uncor- rected Number.	Nett.		Number.	Rate.	Of Non-resi- dents regis- tered in the District.	Of residents not registered in the District.	Under 1 year.		At all Ages.	
			Number.	Rate.					Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1914	60,172	1,335	1,336	22.2	804	13.3	74	21	123	92.1	751	12.4
1915	55,226	1,189	1,182	21.4	929	16.2	142	42	118	99.9	829	15.1
1916	55,078	1,272	1,271	21.2	868	15.2	142	26	96	75.5	752	13.6
1917	65,341	1,110	1,113	17.0	878	14.9	149	48	95	85.3	777	13.2
1918	BR 67,348 DR 60,707	1,204	1,206	17.9	1,149	18.9	266	36	87	72.0	919	15.3
1919	BR 63,107 DR 60,581	1,160	1,158	18.2	856	14.1	151	21	92	79.0	726	11.98
1920	63,655	1,479	1,455	22.7	800	12.5	107	39	117	79.0	732	11.5

Sanitary Circumstances of the District.

RIVERS AND STREAMS.

During last summer complaints were made to the Health Department as to the state of the water in the Gowt's Bridge Drain.

Dry weather had caused a small flow, and there was much vegetation. A certain amount of engine oil, and possibly some organic matter from glue works had also access to this drain. Arrangements were made with the management of the glue works to carry out work which would obviate any possibility of organic material reaching the drain, the vegetation was cleaned out, and the access of oil from engine washings was restricted as far as possible.

The condition of the water became improved.

The catch-water drain which flows through Swallowbeck is liable to pollution from house drainage and through the emptying of cesspools.

WATER.

For the year 1911 I reported on the water supply as follows:—"The water supply for the City and District is now derived from the outcrop of the New Red Sandstone Pebble

beds at Elkesley, Nottinghamshire, some twenty-two miles almost due west of Lincoln. From the four boreholes at Elkesley the water is pumped through a 21" rising main and delivered into the tank at the Westgate Water Tower, from whence it gravitates to the service reservoir on Bracebridge Heath, supplying the demands of the City en route. As the water at the Elkesley boreholes is naturally filtered through a minimum thickness of 100 feet of finest sand, it is of the highest bacteriological purity, and as the hardness is only 7.68, it is well suited for domestic and trade purposes. The inaugural opening of the new supply took place at the commencement of October last."

Since the inauguration of the water from Elkesley, the supply has been constant, and there is no danger of our requirements not being supplied, so long as the pumps are working.

The plumbo solvent action of the water may be regarded as negligible.

A report from Professor McGowan, dated 19th August, 1920, shows that a slight change has taken place in the water since 1911. The hardness is now reported to be 8.4°, of which 6.02° are classed as permanent hardness.

The Analyst makes the following notes:—"The water was clear, bright and colourless, and without any deposited or suspended solids. The above results show that the water maintains its high standard of organic quality, chemically speaking."

With very few exceptions, the houses in Lincoln City, up to the 9th November, 1920, were supplied with this water. On that date, however, a large area was brought within the City Boundary, and a proportion of the houses in the new District obtained their supply of water from wells.

In Hykeham Road, Newark Road, Swallowbeck, and in Doddington-road, most of the houses are served with water from a well on the side of the house. On the same site there is usually a cesspool within 25 or 30 yards of the well.

The sub-soil in the district is chiefly fine sand, and forms a good filtering medium, but as the wells are shallow wells, the water cannot be regarded as a safe one.

During the coming year owners are to be urged to take the city supply where possible.

Average daily consumption for year ending March 31st, 1921, 2,053,000 = 28.36 gallons per head for all purposes.

DRAINAGE AND SEWERAGE.

With the extension of the Borough's boundary and the taking in of a district which has not been sewered, these questions must be dealt with in two distinct portions. In the City proper, in Bracebridge, and in New Boutham practically all the houses drain to the sewer and the sewage is disposed of by filter beds and broad irrigation.

In that part of the new district which is known as Swallowbeck, the drainage and sewerage disposal cannot be classed as good or sufficient. The drainage of most of these houses is to a cesspool on the side of the house. In a number of cases the sewerage in the cesspool is disposed of on the garden. Very few of these houses have water closets, so that this system necessitates privy boxes, which must be emptied periodically.

A conservancy system necessitated by want of sewers in the area is bad, but in conjunction with the fact that on a number of these sites there is also a well, from which drinking water is drawn, it will be acknowledged that the principle is particularly bad.

The Lincoln Corporation are undertaking to remedy these conditions at considerable expense, and new sewers are to be laid, and new pumping station to be erected in 1921.

One portion of the new district, a Garden City area, known as "The Swanpool Garden Suburb," comprises 113 houses; 79 of these houses drain to the sewer, which delivers by gravitation into the City system. The remaining 34 are built on too low a level to deliver into this sewer, and it is necessary to accumulate the sewerage of these 34 houses, and pump on to the higher level, from which it can gravitate into the same system for disposal.

The Sewage Disposal Works are working satisfactorily, and it is hoped that in the future the final effluent will contain still less humus than at present. Several of the old filter beds are being remodelled,

CLOSET ACCOMMODATION.

For the purpose of giving as detailed a statement as possible as to the privies, W.C.'s, and other accommodation on 31st December, 1920, the District is divided into three areas:—

			Privy Vaults.			Privy Boxes.
1. Above Hill	...	...	27	...	...	28
2. Down Hill	...	...	11	...	...	10
3. New Area	...	...	75	...	...	222

It is estimated that there are 15,757 W.C.'s in the City.

SCAVENGING.

The scavenging of the City, the removal and disposal of house refuse, the cleansing of earth-closets, privies, ash-pits and cesspools in the District is done by direct labour, by the Corporation.

With the exception of cesspools, which are emptied as required at the cost of the occupier, the system of scavenging has been so arranged that the round of the City is made in seven to eight days.

The disposal of house refuse is principally by means of a destructor, but it is necessary to tip a certain proportion, owing to the insufficiency and inadequacy of the destructor accommodation.

From the 9th November, 1920, the Corporation had to undertake the supervision of the collecting and disposal of house refuse, and the cleansing of earth-closets, privies, etc., in the extended area where the work had been done by Contractors.

It was found that the work had been inefficiently done, and it took two or three months before the system of a seven to eight days routine was established.

The number of ashpits abolished and movable bins substituted since 1905 is shown below,

Number of Ashpits abolished.				Number of Ashbins provided.			
Year.			Number.	Year.			Number.
1906	...	...	198	1906	...	...	531
1907	...	...	115	1907	...	...	379
1908	...	...	73	1908	...	...	228
1909	...	...	27	1909	...	...	162
1910	...	...	20	1910	...	...	281
1911	...	...	24	1911	...	...	184
1912	...	...	8	1912	...	...	232
1913	...	...	15	1913	...	...	510
1914	...	...	21	1914	...	...	308
1915	...	...	2	1915	...	...	200
1916	...	...	4	1916	...	...	143
1917	...	...	0	1917	...	...	50
1918	...	...	1	1918	...	...	25
1919	...	...	14	1919	...	...	206
1920	...	...	5	1920	...	...	205

Sanitary Inspection of District.

Mr. Crawshaw reports:—

SUMMARY OF THE WORK OF THE SANITARY STAFF.

Statutory notices served	...	...	...	...	0
Informal notices served	...	...	...	...	534
„ „ outstanding on 31st December, 1920					29
Circular letters re notices	...	...	...	...	134
Privy vaults abolished	...	...	...	...	4
New water-closets provided	...	...	...	...	32
W.C. pans provided	...	...	...	...	60
„ „ connected to traps	...	...	...	...	50
„ „ cleansed	...	...	...	...	66
„ cisterns repaired	...	...	...	...	123
„ „ overflow pipes repaired			...	...	24
„ flush pipes repaired	...	...	...	...	71
„ supply pipes repaired	...	...	...	...	79
„ seats repaired	...	...	...	...	32
Choked W.C.'s cleansed	...	...	...	...	121
Drains tested with smoke, etc.	...	...	...	...	258
„ found defective and repaired	...	...	...	...	88
„ relaid	...	...	...	...	59
„ found choked and cleansed	...	...	...	...	264
New inspection chambers built	...	...	...	...	17

Summary of the Work of the Sanitary Staff—*continued.*

Manhole covers provided	6
Drain ventilating pipes tested	288
„ „ „ choked	50
„ „ „ repaired	29
„ „ „ fixed new	18
„ „ „ lengthened	10
Sink waste pipes trapped	23
„ „ „ repaired	42
„ catchpits abolished	0
Eaves spouts and down spouts repaired	97
Yards and passages asphalted	106
Defective roofs repaired	98
Foul sinks removed	30
Urinals cleansed	2
„ provided	3
Windows of houses made to open	9
Ashpits abolished	5
Covered metal ashes bins provided	205
Houses inspected	423
„ found to be dirty	21
„ cleansed	14
„ found to be overcrowded	44
Pig-styes inspected	16
„ found in insanitary condition	3
Visits to Cowsheds, Dairies and Milkshops	10
„ „ Common Lodging Houses	312
„ „ Abattoir and private slaughter-houses	972
„ „ Cattle Market, Butter Market and New Market	150
„ „ Ice Cream Shops	10
„ „ Fried Fish Shops	60
„ „ Canal Boats	10
Complaints investigated	722
Re-visits re complaints	259
Works inspected	256
Living Vans inspected at Fair-time	94
Cases of notifiable diseases investigated	270
„ „ „ „ re-visited	119
„ „ Phthisis (not including above) investigated	59
„ „ „ „ re-visited	0
„ „ Non-notifiable diseases visited	17
„ „ Infectious Diseases removed to Hospital	166
Premises disinfected	323

Summary of the Work of the Sanitary Staff—*continued*

Bundles of wearing apparel passed through steam disinfectors	...	...	...	...	...	...	6
Bedding and mattresses	...	...	...	...	...	...	321
Bundles of bed-clothing, etc.	...	...	...	...	...	...	326
Verminous beddings and mattresses destroyed	...	...	...	...	...	...	10
Rooms stoved to destroy vermin	...	...	...	...	...	...	13
Notices to education re infectious cases in school children	...	...	...	...	...	...	301
Children excluded from school	...	...	...	...	...	...	393
Miscellaneous visits	...	...	...	...	...	...	1,055
Visits to Factories, Workshops and Bakehouses	...	...	...	...	...	...	58
Drains disinfected	...	...	...	...	...	...	29
Rooms disinfected	...	...	...	...	...	...	1,046

PREMISES AND OCCUPATIONS WHICH ARE CONTROLLED BY BYE-LAWS AND REGULATIONS.

Bye-laws have been adopted to deal with :—

1. Nuisances.
2. Common Lodging Houses.
3. Tents, Vans and Sheds.
4. Cleansing of Footways and Pavements.
5. Slaughterhouses.
6. New Streets and Buildings.
7. House Connection Regulations.
8. Dairies, Cowsheds and Milkshops Regulations.

Bye-Laws for the control of Offensive Trades have not been adopted, and Regulations for the control of underground sleeping rooms are not required in the City. We have, however, extended the definition of the term "Offensive Trades" to include in addition to the trades specified in the Public Health Act the trades of Blood Boiler, Hide and Skin Dealer, Tanner, Leather Dresser, Fat Melter, Fat Extractor, Glue Maker, Size Maker, Gut Scraper, Rag and Bone Dealer, and Fried Fish Dealer.

Any person wishing to establish one of these Trades must obtain the consent, in writing, of the Local Authority. By the Lincoln Corporation Act of 1915, power is given to limit the period during which the trade may be carried on without further application being made.

1. *Nuisances.* The Bye-Law with respect to nuisances deals primarily with the removal of filth emitting a stench, but the whole of the work under the heading of nuisances is dealt with under Public Health Act.

2. *Common Lodging Houses.* These are visited periodically and particularly during Race times and Fair times. There are five houses registered as Common Lodging Houses with accommodation for 130 lodgers.

The accommodation is insufficient during normal times, but during the Race weeks there is a great lack of accommodation for this class, and though a number of the Common Lodging Houses take in more persons for two or three nights than they are entitled to do under their registration, there are still a number of men walking the streets without finding proper accommodation.

3. *Tents, Vans and Sheds.* Special arrangements are made by the Lincoln Corporation for van dwellers who attend the Fairs. Water, sanitary accommodation, and accommodation for house refuse is all provided and scavenging is done daily.

There is always trouble with the casual itinerant who pitches his tent or van on open spaces, without making any arrangements for sanitary conveniences.

It is next to impossible to deal with this man in an Urban District, and our efforts are always concentrated on getting rid of him.

4. *Cleansing of Footways and Pavements.* This is dealt with by the Police.

5. *Slaughterhouses.* These bye-laws have been rigidly enforced for many years, and they will be applied to the slaughterhouses in the added area as occasion requires.

6. *New Streets and Buildings.* These bye-laws are administered by the Surveyor's Department.

SCHOOLS.

The general sanitary conditions of the schools are referred to in my School Report; but I append a list of school closures during the year as a result of prevalence of Infectious Disease, i.e., Whooping Cough and Measles.

DATE.	NAME OF SCHOOL.	REASON OF CLOSURE.
Feb. 2 to Feb. 18 ...	S. Nicho'as Infants ...	Measles
Feb. 12 to Mar. 1 ...	Eastgate Infants ...	,
Feb. 26 to Mar. 15 ...	Miss Cookson's G. (Std. 2) ...	,,
Mar. 2 to Mar. 22 ...	Rosemary Lane Infants	Measles and Whooping Cough
Mar. 12 to April 6 ...	S. Faith's Infants ...	,,
Mar. 15 to April 6 ...	Monks Road Juniors	Measles
Mar. 18 to April 6 ...	S. Andrew's G. & I. ...	,,
„ „	S. Peter-at-Gowts Infants	,,
April 6 to April 26 ...	S. Swithin's Infants ...	,,
„ „	Monks Road Juniors ...	,,

Food.

MILK SUPPLY.

Lincolnshire is an agricultural county, and ample supplies of milk are produced. Railway and transport facilities, however, are far from good, and it is difficult to bring milk from the purely agricultural districts into the more populous centres. There is no shortage of milk in the City, and it has not been found necessary to institute a system of milk collection by road transport.

Analysis shows the average of the milk to be of fair quality, but complaints have been received concerning dirt in milk. Samples are being analysed for extraneous matter. A standard of uncleanness, fixed at 4 parts of dirt per 100,000 parts of milk, is allowed.

This question of dirt in milk does not receive sufficient attention from milk producers and dealers. The milker finds it necessary to strain the milk, and every dealer possess a milk filter. The necessity for filtration should be sufficient to prove that something is seriously wrong with the method of production and handling. The fact is that many persons

handling milk and milk vessels do not understand the substance with which they are dealing, and that every particle of dirt carries bacteria into the best possible culture material, and that rapid multiplication of bacteria takes place.

There are many strainers and milk filters advertised, but rarely does one see an advertisement for a suitable milking pail. The question of a bacterial count carries no meaning to the ordinary farmer, but if we are to look for Grade A milk it will be necessary to interest milk producers in the subject.

With cleanliness in milking, the use of a proper milking bucket, and with refrigeration, it is possible to obtain a negative result on a culture plate after 12 hours, against an ordinary count of 50,000 per c.c. of milk.

.SOUR MILK.

During the hot season of the year the milk from dairy farms outside is sometimes liable to become sour shortly after delivery within the City.

The consumer has little or no remedy, although the milk as an article of food becomes useless to him for the purpose for which it is intended.

It has been the custom during and after the war to deliver milk from these farms once a day, and the afternoon milk is kept until next day before reaching the consumer. Milk conveyed by rail during 1920 has also been affected by the slow and infrequent local train service, and has not been improved in consequence.

Much of this trouble might, nevertheless, be removed by proper cooling at the time of milking. Unfortunately, some dairymen are apathetic in this matter, and will not incur the comparatively small expense necessary. Legislation compelling dairymen to cool milk at the time of milking is urgently required, and is necessary in the interests of health.

Powers exist to prevent the watering of milk and the abstraction of cream, but the public is not adequately protected when milk is delivered, swarming with bacteria, and in a condition which rapidly leads to souring.

PUBLIC HEALTH (MILK AND CREAM)
REGULATIONS, 1912 AND 1917.

Report for year ended 31st December, 1920.

	Number of Samples examined for the presence of a Preservative.	Number in which Preservative was reported to be present.
Milk	90	0
Cream	0	0
Preserved Cream... ..	0	0
Instances where the requirements as to labelling have not been observed	0	0

The 90 samples of milk shown above were taken under the Sale of Food and Drugs Acts, and are shown under the report for those Acts. All samples of milk were certified to be free of preservatives.

There was very little cream available for sale last year, and no samples were taken.

MILK (MOTHERS AND CHILDREN) ORDER, 1919.

The powers given under this Order have been exercised in conjunction with the Infant Welfare Department, and during the year 47 Expectant Mothers, 116 Nursing Mothers, and 173 children under five years of age were supplied with cow's milk.

In addition, 94 children under 2 years of age were supplied with Dried Milk under cost price.

Mr. CRAWSHAW REPORTS:—

Meat.

During 1918 and 1919 the Abattoir was made the receiving centre for all emergency slaughtered animals for a large area outside the city. The carcasses were allocated to retailers under the Food Controller's orders, but the work of inspection fell upon this Department. Now that the Abattoir is no longer the Government slaughter-house, the number of these casualty carcasses is greatly reduced, and it leads one to the consideration of the problem of their disposal. Undoubtedly there is the same proportion of fourth-grade animals to-day as in 1918, but the Meat Inspectors do not see them, and they certainly do not

reach this City. It is a well-known fact the Meat Inspection in the country districts is at a discount, and the time has arrived when qualified food inspectors should be appointed under the Ministry of Health or the County Councils, with full powers to safeguard the food supply. Their duties would include the inspection of meat and rural slaughter-houses, the inspection of cowsheds, and the methods of milk production and handling, and arrangements could be made for their services to be available in special cases at the call of the District Inspector.

LIST OF SLAUGHTERHOUSES.

In 1914.	In January, 1920.	In December, 1920.
REGISTERED:— One Abattoir belonging to the Corporation.	One Abattoir belonging to the Corporation.	One Abattoir belonging to the Corporation.
LICENSED:— Herrick, J. W., Craven Street	Herrick, J. W., Craven Street,	Herrick, J. W., Craven Street.
Nissler & Sons, J. A., High Street.	Nissler & Sons, J. A., High Street.	Nissler & Sons, J. A., High Street.
—————	Leachman, George G., St. Paul's Lane.	Leachman, George G., St. Paul's Lane.
—————	Industrial Co-operative Society, Brayford Wharf.	Industrial Co-operative Society, Brayford Wharf.
Sowerby, George, 7, Sincil Street.	Sowerby, George, 7, Sincil Street	Sowerby, George, 7, Sincil Street
Clayton, Thomas, 171, High Street.	Curtis, A. W., & G. Barrand, rear of 171, High Street.	Curtis, A. W., & G. Barrand, rear of 171, High Street.
Maddison, J. B., St. Paul's Lane.	Maddison, J. B., St. Paul's Lane.	Maddison, J. B., St. Paul's Lane.
Hill, Mrs. R., & Taylor Bros., Alfred Street.	Hill, Mrs. R., & Taylor Bros., Alfred Street.	Hill, Mrs. R., & Taylor Bros., Alfred Street.
Horton, E., Peel Street.	Horton, E., Peel Street.	Horton, E., Peel Street.
Dalton, S. S., Boundary Street.	Dalton, S. S., Boundary Street.	Dalton, S. S., Boundary Street.
Tinker, G., Occupation Road.	Applewhite, Chas. W., Occupation Road.	Applewhite, Chas. W., Occupation Road.
Varty, J., Grantham Street.	Varty, J., Grantham Street.	Varty, J., Grantham Street.
Pateman, F. J., 43, Newport.	Pateman, F. J., 43, Newport.	Pateman, F. J., 43, Newport.
Industrial Co-operative Society, Sincil Bank.	—————	—————
Including Slaughterhouses occupied by:— A. A. Mays, Booth Bros, H. Gaunt, Foster & Son.		

The whole question of the slaughter-houses in the newly added area has been referred to a Sub-Committee of the Health Committee for a report and recommendation,

The Knackers' slaughter-houses are licensed until May, 1921.

The following is a list of Knackers' Yards and Slaughter-houses in the new area :—

Aubrey Hughes	...	...	Knacker	...	Poppleton's Lane.
John Christopher	...	...	"	...	" "
J. H. Leachman	...	...	Butcher	...	Bracebridge Low Fields.
Z. Priestley	...	...	"	...	Cross O'Cliffe Hill.
J. Hobbins	...	...	"	..	High Street, Bracebridge.

UN SOUND MEAT AND FOOD DESTROYED DURING 1920 :—

				st.	lbs.	
Beef	15 carcasses with offals	...		639	0	tuberculous
"	8 " "	...		303	0	non-tuberculous
"	parts of 30 carcasses	...		281	13	tuberculous
"	" 6 "	...		43	3	non-tuberculous
Mutton	46 carcasses with offals	...		195	2	unsound
"	parts of 7 carcasses	...		10	5	unsound
Pork	13 carcasses with offals	...		174	4	tuberculous
"	7 " "	...		47	2	non-tuberculous
"	parts of 12 carcasses	...		32	2	tuberculous
"	" 2 "	...		4	12	non-tuberculous
Veal	8 carcasses with offals	...		83	0	unsound
"	parts of 3 carcasses	...		25	1	"
Offals, Miscellaneous	...	...		309	10	"
Frozen Meat	...	...		267	9	"
Hams	...	...		262	9½	"
Bacon	...	...		4	8½	"
Fish	...	...		30	11	"
Rabbits	...	...		32	3½	"
Frozen Rabbits	...	...		2	2	"
Horseflesh	...	...		10	0	"
Meat Pies	...	...		2	5¾	"
Tinned Fish	...	...		5	1	"
Tinned Meat	...	...		25	3¾	"
Tinned Fruit	...	...		9	1	"
Tinned Milk	...	...		36	13½	"
Butter	...	...		31	3	"
Flour	...	...		9	7½	"
Fresh Fruit	...	...		22	12	"
Currants	...	...		24	4	"
Pickles	...	...		0	2	"

Total ... 2,925 11

1,127	5	tuberculous
398	3	non-tuberculous
1,400	3	unsound

2,925 11 Total

Food and Drugs' Act.

LIST OF SAMPLES SUBMITTED FOR ANALYSIS DURING

1920.

Milk	...	...	90	(81 Official and 9 Informal)
Ground Ginger	...	...	9	(Informal Samples)
White Pepper	...	...	12	do.
Cocoa	...	...	5	do.
Mustard	...	...	7	do.
Coffee	...	...	2	do.
Ground Rice	...	...	6	do.
Baking Powder	...	...	1	do.
Medical Prescriptions	...		2	(Official Samples)

Total .. 134

Milk Samples (Official).

There were 81 Official Samples of New Milk taken during the year 1920, three of which were adulterated. Particulars of the three samples are given below.

PROSECUTIONS.

The following samples, Nos 122, 129 and 45, were adulterated: —

No. in Record.	Date 1920.	Adulteraton	Article.	Fine.	Cost.
122	Jan. 29	Milk Fat ... 7.42 per cent. Non Fatty Solids 3.78 " Water ... 88.80 " <u>100.00</u> "	New Milk.	£2 2s.	—
129	Jan. 30	Milk Fat ... 7.57 per cent. Non Fatty Solids 2.40 " Water ... 90.03 " <u>100.00</u> "	"	"	—
45	July 6	Milk Fat ... 7.84 per cent. Non-Fatty Solids 3.85 " Water ... 88.31 " <u>100.000</u> "	"	£5 0s.	—

Milk Samples (Informal).

There were 9 Informal Samples of New Milk taken during the year 1920, three of which were adulterated. Particulars of these three samples are given in the following table. Nos 134 and 139, were taken from the same Milkseller.

No. in Record.	Date. 1920.	Adulteration.	Article.	Remarks.
134	Feb. 3	Milk Fat ... 8.13 per cent. Non Fatty Solids 3.9 Water ... 87.97 <u>100.00</u>	New Milk.	Instructed by the Chairman of the Health Committee to caution the Milk-seller. Samples taken from cows and found to be below the standard. Cows sold.
139	Feb. 4	Milk Fat ... 8.38 per cent. Non Fatty Solids 4.8 Water ... 86.82 <u>100.00</u>	"	See Sample 134.
135	Feb. 3	Milk Fat ... 8.37 per cent. Non Fatty Solids 3.5 Water ... 88.13 <u>100.00</u>	"	

There were two Medical Prescriptions taken during the year 1920, and both these proved to be adulterated. Particulars of these samples are given in the following table :—

No. in Record.	Date. 1920.	Adulteration.	Remarks.
120	Jan 19	Salicylate of Soda 7.0 Grain Bicarbonate Potash 7.1 " Spirit Ammonia Aromant present. Water 1oz.	(12 ozs. asked for—16 ozs. given). Cautioned by letter from Town Clerk, by the Chairman of the Health Committee's instructions.
121	Jan. 20	Potassii Bicarb, 6.8 grains. Potassii Iodide 3.6 " Aqua: Chloroform to 1oz. volume.	(12 ozs. asked for—16ozs: given). Cautioned by letter from Town Clerk, by the Chairman of the Health Committee's Instructions.

Prevalence of, and Control over, Infectious Diseases.

INFECTIOUS DISEASES GENERALLY.

There was a slight diminution during the year in the number of Scarlet Fever cases notified, as compared with 1919, but some increases in Diphtheria, although the Mortality Rate was comparatively low. Anti-toxin was supplied by the Health Department, and regularly applied for by the Medical Profession.

Several cases of Encephalitis Lethargica were notified during the year, and there were six deaths, although the diagnosis in at least two cases has to be revised in view of later information.

Measles and Whooping Cough were the most serious Zymotic Diseases prevalent during the year.

As regards diseases notifiable under regulations of 7th January, 1919, no dysentery or trench fever were notified, but four malarial cases were reported, which proved to be chronic, the disease having been originally contracted in service overseas.

Fourteen cases of Pneumonia were notified.

There were eleven deaths from Influenza, which existed only in sporadic fashion, and did not become epidemic at any period of the year.

Measles and Whooping Cough were prevalent from February to April, resulting in certain school closures, and 49 deaths (i.e., Measles 31, Whooping Cough 18). They account for the greatest proportion of the Zymotic Death-Rate.

The services of the Lincoln Nursing Association were utilized for the sick visiting of infants and young children suffering from these diseases.

There is no cleansing station in Lincoln, but all disinfection of bedding, clothes, etc., is carried out by steam disinfection at the City Fever Hospital. The need for a station of this sort has long been felt.

Notification of Tuberculosis has been fairly satisfactorily carried out by the Local Medical Profession, but it must be remembered that many men do not apply for medical aid until the disease is already fully established and cure doubtful or impossible.

CASES OF INFECTIOUS DISEASES NOTIFIED DURING THE YEAR 1920.

NOTIFIABLE DISEASES.	NUMBER OF CASES NOTIFIED.							
	At all ages.	At all Ages—Years.						
		Under 1.	1 to 5.	5 to 15.	15 to 25	25 to 45.	45 to 65.	65 and upwards.
Small Pox .....	...	...	...	..	...	...	...	...
Cholera (C) Plague (P).....	...	...	...	..	...	...	...	...
Diphtheria (including Membranous croup)	128	...	14	92	12	9	1	...
Erysipelas	13	...	1	2	...	4	4	2
Scarlet Fever	90	...	11	66	6	6	1	...
Typhus Fever.. . . .	...	...	...	..	..	...	...	...
Enteric Fever.....	...	...	...	...	...	...	...	...
Relapsing Fever (R) Continued Fever (C) .....	...	...	...	...	...	...	...	...
Puerperal Fever.....	3	...	...	...	...	3	...	...
Cerebro-spinal Meningitis.. .....	...	...	...	...	...	...	...	...
Poliomyelitis ... .....	...	...	...	...	...	...	..	...
Ophthalmia Neonatorum	13	13	...	...	...	...	...	...
Pulmonary Tuberculosis	59	1	...	10	16	25	7	...
Other forms of Tuberculosis.....	19	...	3	11	2	2	1	...
Malaria	4	...	...	...	1	3	...	...
Encephalitis Lethargica	11	...	...	1	6	3	1	...
Pneumonia (All Forms)	14	1	..	3	4	2	2	2
TOTALS	354	15	29	185	47	57	17	4

SCARLET FEVER.

During 1920 there were 90 cases of Scarlet Fever notified in the City, as compared with 100 cases in 1919.

The number of cases notified in each year for the past ten years is given below:—

1911—221	1916—119
1912— 97	1917—148
1913— 92	1918—133
1914—170	1919—100
1915—119	1920— 90

Only one death was attributable to this disease, which is a sufficient guarantee of its mild character.

Fifty of the notified cases were removed to the City Hospital.

As in previous years, the Medical Officer of Health offered his services to medical men in cases of doubtful diagnosis.

On the notification of a case, details of the sanitary condition of the premises and any possible source of infection were investigated.

DIPHTHERIA.

I note with satisfaction that the case mortality has been low, especially as compared with previous years.

Contacts of notified cases have been swabbed, especially as regards school children, and the services of the bacteriological laboratory were placed at the disposal of practitioners in the City, both for diagnosis and the discovery of possible carriers.

One hundred and twenty-eight cases of Diphtheria were notified during 1920, as compared with 72 notifications in 1919.

Five deaths resulted from this cause, giving a case mortality of 3.9 per cent.

1909 case mortality	11.0	1915 case mortality	19.6
1910 " "	8.5	1916 " "	5.1
1911 " "	6.9	1917 " "	9.6
1912 " "	2.4	1918 " "	6.5
1913 " "	4.4	1919 " "	8.3
1914 " "	9.4	1920 " "	3.9

The notifications received during the last ten years are as follows :—

1911—145	1916— 78
1912—122	1917— 52
1913— 67	1918— 61
1914— 95	1919— 72
1915— 56	1920—128

Ninety-two of the cases were removed to the City Hospital.

SMALL-POX.

No cases were notified during the year, and no cases were vaccinated by the Medical Officer of Health under the 1917 regulations.

The need for ever present vigilance exists as regards the possibility of a small-pox outbreak, especially in view of the large proportion of unvaccinated children in the City.

TYPHOID FEVER.

No cases of Typhoid Fever were notified, which is a matter for sincere congratulations in view of the history of past years.

ENCEPHALITIS LETHARGICA.

Eleven cases of Encephalitis were notified during the year.

Two in January.	Two in September.
One in March.	Three in November.
One in July.	Two in December.

Five cases were admitted to the City Hospital. Three died in the Institution. Pathological specimens of the brain in all three cases were submitted to Dr. Parsons, the Pathologist acting for the Ministry of Health. In two cases he was able to demonstrate the presence of Tubercle Bacillus, so that these particular cases must now be regarded to have been a form of Tuberculous Meningitis.

Three cases were removed to the County Hospital and died in that Institution. Post-mortem examinations were made in two of these, and in one case the pathological appearances were consistent with the disease. Three cases were treated at home, and recovered. There were, therefore, six deaths in all.

Every effort was made in the investigation of the conditions existing on notification to obtain any information of contact with other persons, who might have suffered from this disease.

Little is known at present as to the manner of spread, but it is considered that infection may reside in the naso-pharynx of infected persons.

Isolation and disinfection is certainly desirable.

Pulmonary Tuberculosis.

Under the Tuberculosis Regulations, 1912, 59 cases of Phthisis were notified.

The total number of deaths from Phthisis in 1920 was 47, and equivalent to a death-rate of .72 per 1,000.

<i>Year</i>	<i>Est. Pop.</i>	<i>Deaths</i>	<i>D.R.</i> <i>per 1000</i>	<i>Year</i>	<i>Est. Pop.</i>	<i>Deaths</i>	<i>D.R.</i> <i>per 1000</i>
1907	53,341	68	1.38	1914	60,172	44	.73
1908	54,017	68	1.30	1915	55,226	55	.99
1909	54,765	63	1.18	1916	55,079	55	.99
1910	55,474	45	.85	1917	58,617	65	1.10
1911	57,285	60	1.40	1918	60,707	64	.95
1912	58,358	56	.96	1919	60,581	57	.94
1913	59,322	57	.96	1920	63,655	47	.72

FORMS OF TUBERCULOSIS OTHER THAN PHTHISIS.

There were 19 cases notified under the above head, giving the following classification : —

Tuberculosis of Glands in Neck	...	...	5
„ „ Joints	...	...	8
„ „ Bone	...	...	1
„ „ Peritoneum and Mesentery			
„ „ „ Glands	...	...	3
„ „ „ Meninges	...	...	2
			—
	Total	...	19
			—

ADMINISTRATION AND CONTROL OVER TUBERCULOSIS.

DISPENSARY AND SANATORIA.

There is one Tuberculosis Dispensary for the City of Lincoln, at 11, Bank Street. Clinics are held twice a week.

The Medical Officers who attend are the Medical Officer of Health as Chief Tuberculosis Officer, and the Resident Medical Officer at the City Hospital and Sanatorium, who is Assistant Tuberculosis Officer. One Nurse is available on a whole-time basis for attending the Clinics, visiting patients in their homes, and there is an Assistant Nurse who divides her duties between this and V.D.

These Nurses paid 107 primary visits to patients during the year, 3,107 re-visits, inclusive of 1,406 visits to bed-ridden cases.

During the year 169 males attended the Dispensary and 86 females, making a total of 2,278 attendances.

The Dawber Sanatorium, which is managed in connection with the City Hospital, consists of a two-storeyed building on Sanatorium lines, and a single-storeyed pavilion on the hospital principle, these provide 42 beds for early and more advanced Phthisis.

During the past year the Enteric Fever Pavilion has also been used for Male Consumptives, providing an additional 18 beds.

The Resident Medical Officer at the City Hospital is in charge of these beds, under the Medical Officer of Health as Medical Superintendent.

CO-OPERATION WITH MEDICAL PRACTITIONERS

Medical Practitioners frequently send cases of suspected Tuberculosis to the Dispensary for further examination, and consultations take place as to the best method of dealing with special patients.

As regards cases of doubtful diagnosis, the patients attend the Dispensary for an observation period.

OTHER METHODS.

“Home Contacts” who show any doubtful symptoms are brought to the knowledge of the Tuberculosis Officer from the School Clinic, and the Tuberculosis Nurses obtain information as to possible infected contacts in patient's homes.

Wherever possible, examination of Sputa in the Corporation Laboratory is used as an aid to diagnosis. This applies to practically all the patients examined at the Dispensary during the year.

As regards dental treatment, the Council has expended no money at present, but the cost of extraction of carious teeth has been paid for by the Dawber Charity Funds, when the Tuberculosis Officer has certified this to be absolutely necessary.

The same procedure as regards the Dawber Fund applies to the provision of extra nourishment for patients living at home, no monies having been expended by the Council for this purpose.

Extra nourishment for Tuberculous ex-Soldiers is provided by the Lincoln War Pensions Committee.

Provision for nursing Tuberculous patients at home has been made by the Council through the Local Nursing Association. A grant of £50 per annum being given for this purpose to the Association.

NON-PULMONARY TUBERCULOSIS.

A grant has been made by the Corporation to the County Hospital of £100 per annum for the provision of two beds for Non-Pulmonary or Surgical Tuberculosis, but no surgical apparatus has been provided.

AFTER CARE.

There is, at present, no voluntary Committee for dealing with After Care, which is regrettable. It is to be hoped that the Health Committee may form a Sub-Committee with suitable co-opted members.

As regards the finding of employment for patients, every effort has been made by the Tuberculosis Officer in co-operation with the Manager of the Local Labour Exchange, but that is as far as arrangements have been carried at present.

Three shelters are available, by the kindness of the Dawber Committee, for the use of suitable cases in the homes of patients.

EFFECT OF OCCUPATION ON THE DISEASE.

As regards males in Lincoln, there would appear to be a higher incidence of Tuberculosis amongst those employed in the City foundries than those engaged in other work, probably due to dusty occupations in a confined space.

METHODS ADOPTED FOR PREVENTION.

Earlier notification is still required as the mortality from Phthisis is too high in proportion to the number of notifications.

The cause of this is probably due to the following :—

1. Patients do not seek medical advice until the disease is already fully established, and commences seriously to affect their daily avocations.
2. Some medical men are chary of notifying unless a diagnosis can be confirmed by a positive sputum. It should be remembered that a negative result of a sputum does not necessarily negative a diagnosis of incipient Phthisis unless many samples have been taken

Every endeavour is made to teach patients in the Sanatorium and attending the Dispensary the proper precautions to be taken in preventing the spread of the disease. Disinfectant, spit cups, flasks and paper handkerchiefs are provided.

When information is obtained of insanitary defects in the homes of consumptives, these are remedied as far as possible.

Housing difficulties, in my opinion, have a serious effect in promoting the spread of the disease.

In conclusion, I regard the question of suitable employment for Consumptives one of the most difficult problems that presents itself. Men whose earning capacity is not totally destroyed, are still unable to do the standard hours required of their healthy colleagues. In practice they are required to do all or nothing. As a consequence men who could work four to six hours a day, without undue strain, do nothing at all. This prevents their mind being properly employed, and spoils their morale.

In my opinion, it is better that a consumptive, if not an inmate of an Institution, should be doing work which is not quite suitable, rather than no work at all.

Unfortunately, he is unable to compete with the economic conditions by which he is surrounded, and drops out, although he is still capable of certain diminished earning capacity.

Sanatoria do not meet this difficulty,

Labour Colonies on right lines may be the ultimate solution.

I made a suggestion in last year's report that Aviation Camps, which are now mostly demobilized and their plant dispersed, might in some instances have been adopted for Labour Colonies for combined areas, such as County Councils and County Boroughs.

Sanatoria are not the last word in dealing with Tuberculosis, as in many respects the benefits obtained for patients are only temporary.

CO-OPERATION WITH OTHER INSTITUTIONS.

Cases of Tuberculosis of the Lung occurring in the County Hospital are admitted to the City Sanatorium. Arrangements have been made with the former institution for the maintenance of two beds for Surgical Tuberculosis.

I would point out that as the Tuberculosis Officer is also Chief School Medical Officer, he is in touch with cases of Tuberculosis discovered at the School Clinics.

Venereal Disease.

The Council provides a Dispensary for the treatment of Venereal Disease.

Clinics are held twice a week for both Males and Females, in the premises of the Tuberculosis Dispensary, and on such days when this Dispensary is not in use for Tuberculosis purposes.

Part of the services of a whole-time Medical Officer are available, jointly with the Borough of Grimsby, and the Clinic also serves for the area of the Lindsey County Council, contiguous with the City.

The services of an Orderly and a Nurse have also been provided.

I am bound to refer to the excellent and skillful services of Dr. W. C. P. White as Medical Officer of this Clinic.

At present provision has not yet been made for beds in connection with the Clinic, otherwise the scheme would have been considered complete.

Cases have been referred to the Clinic by Medical Practitioners, and the working with the Medical Profession generally has been smooth and harmonious.

There is an increased number of patients, who realise the importance of taking early steps to place themselves under requisite treatment.

Arrangements have been made for Irrigation cases to be treated daily during the week, in intervals between the Clinics.

Advertisements and leaflets, pointing out the desirability of early attendances at the Clinic, on the principle that "Prevention is better than cure," have been circulated in the City.

There are several Medical Practitioners on the Staff of the County Hospital, and several others, who could show special experience as regards the injection and administration of Salvarsan Substitutes, but none have applied to the Medical Officer of Health for a private supply.

As a rule, cases are referred to Dr. White at the Clinic for this particular treatment.

Arrangements have been made with the City of Nottingham Corporation Laboratory for the examination of specimens of blood for Wasserman Tests, etc.

Practitioners send patients to the Clinic for the purpose of a specimen of blood being taken.

No action in the District has yet been taken under the Venereal Disease Act, 1917.

Number of patients who attended the Clinic from 15th April, 1920, to 31st December, 1920, are:—

Males	...	...	...	127
Females	...	...	...	37
Children	...	...	...	18
				<hr/>
			Total ...	182
				<hr/>

Total number of attendances at the Clinic, 2,820.			
Pathological specimens examined at the Clinic	...	...	100
,, ,, sent to the Nottingham Laboratory :—			
Gonococcus, Spiro-Chœtes and other organisations	...	...	62
Wasserman Tests	...	...	145
		—	207
Specimens Total			307
<hr/>			
Injections of Salvarsan Substitutes	...	...	359

Midwives' Act.

Seven Midwives gave notification of their intention of practising during the year.

Thirty-five records of sending for medical help were notified to the Maternity and Child Welfare Department, in accordance with the requirements of the Central Midwives' Board, also 23 still births were notified.

Ten visits of inspection to Midwives were made, re their house, bag and appliances.

Fifteen special visits were paid to Puerperal cases.

Notification of Births Act, 1907 and 1915.

Birth enquiry visits	...	...	...	...	1501
,, ,, re-visits	...	...	...	...	868
Visits to those over one and under five years					872
Special Visits	...	...	...	...	175
Notices sent out re Notification of Births	...				258

CONDITIONS FOUND ON BIRTH ENQUIRY VISITS.

Houses with two families or more occupying separate rooms	...	...	...	...	176
Houses with no through ventilation	...	...			44
,, ,, unsuitable food storage accommodation	...	...	...	..	26
,, overcrowded	...	...	...	...	23
.. dirty and overcrowded			...	...	5
,, damp	...	...	...	...	5
,, infested with rats	...	...	...		1
,, ,, ,, beetles	...	...	...		1

Conditions found on Birth Enquiry Visits—*continued*.

Cases referred to the N.S.P.C.C.	...	...	4
No ashes bin	...	...	23
Defective ashes bin	...	...	31
Water closets defective	...	...	15
Drains choked	...	...	12
Various defects	...	...	10

Of the notified births visited 1,113 were breast fed.

„ „ „ „ „ 388 „ bottle „

INFANTILE DEATH INQUIRIES.

Number of deaths investigated 111 :—

Breast fed	...	...	28
Artificially fed	...	...	41
Breast and artificial food	...	...	14
Proprietary Foods	...	...	6
Died shortly after birth	...	...	22

111

CONDITIONS NOT FAVOURABLE TO INFANT
HYGIENE FOUND AT ABOVE ENQUIRIES.

Houses with unsuitable food storage accommodation	...	...	16
Houses with no through ventilation	...	...	10
„ dirty and ill-kept	...	...	3
„ overcrowded	...	...	4
„ with two families	...	...	2
			35

Maternity and Infant Welfare.

Infant Welfare is undertaken at Offices and Clinics situated at 34, Newland. This has proved a commodious Centre, and work has proceeded smoothly throughout the year. Accommodation is provided for the Medical Clinics, investigations of necessitous cases, school for Mothercraft, and general routine.

Recently Ante-natal Clinics have been added to the other activities at the Centre, which is contiguous with the Maternity Home.

The work of the Centre and the Home is briefly tabulated below. Although no Voluntary Society has a definite welfare

scheme of their own, voluntary helpers have given invaluable assistance during the year, especially in regard to the School for Mothers. The history cards of the children attending under five years of age are afterwards available for the School Medical Clinic.

CLINIC REPORT.

1,914 mothers with babies on the register attended the Centre during the year.

Total number of attendances made, 9,452.

The following table summarises the attendance at the Centre during the year 1920 :—

No. of Babies first visits.					No. of visits by babies who have previously attended.					Attendances of Kes-teen Babies.	Total
Under 1 yr.	Under 2 yr.	Under 3 yrs.	Under 4 yrs.	Under 5 yrs.	Under 1 yr.	Under 2 yrs.	Under 3 yrs.	Under 4 yrs.	Under 5 yrs.		
712	161	45	28	11	5415	1917	322	109	25	706	9,452

762 of the above were seen by the Doctor and accounted for 1,444 consultations.

These 762 are classified with regard to the physical conditions as follows :—

Suffering from wasting	...	...	...	7
„ „ rickets	...	...	...	11
„ „ minor ailments	...	...	...	645
„ „ skin ailments	...	...	...	61
„ „ chronic diseases	...	...	...	19
„ „ tubercular diseases	...	...	...	19
				762

Of the 762 cases :—

Referred to Hospital	...	...	...	51
„ „ District Nursing Association	...	...	...	17
„ „ Private Doctor	...	...	...	61
„ „ Dispensary	...	...	...	8

Of the remaining 1,152 cases :—

Children normal—general advice given	...	...	...	922
Suffering from incorrect feeding	...	...	...	230
				1152

NECESSITOUS CASES.

Home Helps.

Number of families supplied with Home Helps	38
---	----

Home Nursing.

Families supplied	7
--------------------------	---

Midwifery Assistance.

Cases receiving help towards midwifery fees	10
---	----

FOOD AND MILK.:—

Expectant Mothers.

Expectant mothers supplied with cow's milk	47
--	----

Nursing Mothers.

Nursing mothers supplied with cow's milk	116
--	-----

Children under five years of age.

Children supplied with cow's milk ...	173
---------------------------------------	-----

Children under two years of age supplied with dried milk below cost price ...	94
--	----

SCHOOL FOR MOTHERS.

The School for Mothers is entirely conducted by Voluntary Workers.

There are on the Register	52
----------------------------------	----

Attendances made	157
-------------------------	-----

Sewing demonstrations and lectures on hygiene and cooking are given.

Voluntary workers assisting at the Centre	23
---	----

Attendances made	265
-------------------------	-----

Callers at office other than mothers and babies, 1,027.

ANTE-NATAL CASES.

Attended at the Home	27
-----------------------------	----

Attended at the Clinic	62
-------------------------------	----

Visited by District Midwives and Pupils	53
---	----

142

Of these 142 cases :—

Medical advice and treatment given	...	13
Milk allowed	(See necessitous cases)	42
Food and milk allowed		5
Patients advised by Medical Practitioners		
to enter Maternity Home	... ..	4
Normal cases	... ..	78
		<hr/>
		142
		<hr/>

POST-NATAL CASES.

144 mothers applied on their own behalf after child-birth.

Medical advice and treatment given	...	25
Normal cases	... ..	119
		<hr/>
		144
		<hr/>

Of these 144 cases :—

Milk allowed	(See necessitous cases)	74
Food and milk allowed		42
Transferred to Private Doctor	... ..	2
Transferred to Hospital	... ..	Nil

MATERNITY HOME.

Patients admitted into the Home	... ..	120
Patients discharged	... ..	116
Patients still in the Home 1st Jan., 1921		4
Private doctors in attendance	... ..	10
Maternal deaths (Eclampsia) patient		
unconscious when admitted, died two		
hours later	... ..	1
Number of infants born	... ..	119
Stillborn or died within 10 days after birth		5

Causes :—

Retroverted Incarcerated Gravid Uterus.

2 Eclamptic Cases.

1 Prenatal death.

1 Premature baby died of inanition.

Patients' Visitors	... ..	1803
General Visitors	... ..	1011

PUPIL MIDWIVES.

Five pupils entered for the Central Midwives Board Examination and all were successful.

DISTRICT MIDWIFERY.

The number of cases attended by Municipal Midwives were 344.

PUERPERAL FEVER, OPTHALMIA AND INFANTILE INFECTIONS.

Three cases of Puerperal Sepsis were notified during the year, two by Medical Practitioners and one by a Midwife. In each case a satisfactory recovery was made.

There were thirteen cases of Ophthalmia Neonatorum; eight notified by Medical Practitioners and five by Midwives. Twenty-six visits were made by Health Visitors, and 53 visits by Nurses of the Lincoln District Nursing Association acting in co-operation with the Infant Welfare Centre. One case, which was very severe, was removed to the City Fever Hospital for treatment, as the County Hospital will not admit this disease. The ultimate progress of this case resulted in a saving of the left eye, but the right eye was permanently affected. All the other cases made satisfactory recoveries. An arrangement has been made by the Corporation with the Lincoln District Nursing Association for the nursing of measles, whooping cough and diarrhoea occurring in infants and young children on information being given from the Infant Welfare Centre. This has proved a great boon during the past year, as measles and whooping cough were very prevalent in the early spring. I have no doubt that the mortality from these diseases would have been greater unless this nursing had been obtained.

Sanitary Administration.

STAFF.

A report on the re-organisation of the Health Department was presented to the Health Committee during the year, in view of the extended City Boundaries, and after careful consideration it was decided that the personnel should consist of :—

1. A Chief Inspector of Nuisances.
2. A Special Inspector for meat, food, slaughter-houses and cow-sheds.
3. Three District Inspectors.
4. A Chief Clerk of mature experience to superintend the clerking and records of the Department.
5. Certain alterations to increase existing accommodation at the Health Offices were also discussed.

My original report suggested the appointment of a Special Housing Inspector, but this was not agreed upon at present.

Owing to the serious financial outlook which shortly afterwards occurred the whole scheme was postponed, to my regret, but it will be found necessary, ultimately, to follow the above recommendations so that the work may be placed upon a satisfactory basis, especially in view of the increased area of the City.

At present we have no additional Inspector to cover the new District, and the position of Chief Clerk is not filled. At the same time I should like to acknowledge the work by Miss Herring, who fills the post of general clerk with ability and devotion to duty.

The accommodation of the Health Offices is inadequate.

I may also point out that considerable extra clerking duties have now been placed on the Department by the Local Authority becoming answerable for the administration of Sanatorium Benefit.

The detailed work of the Sanitary Inspectors for the year has already been recorded.

The administration of the Rats and Mice (Destruction) Act, 1919, imposes a lot of work on the Sanitary Inspectors, occupying about one-third of their time, and taking them off their usual work to that extent.

Many people have a wrong idea of their responsibilities under this Act. It cannot be too well known that the duty of clearing premises of rats and mice is imposed on the occupier. The Officials are prepared to render every assistance with the object of achieving organised action, as the best results are only obtained by co-operation.

Hospital Accommodation.

CITY HOSPITAL AND DAWBER SANATORIUM PAVILIONS.

During the year a sum provided by the Dawber Committee was spent in laying out the grounds in connection with the Sanatorium. A bowling green, croquet lawn and clock golf have been provided, and the surroundings considerably beautified. Indoors a billiard table and piano are available. Every effort is made to make a stay in the Sanatorium bright and cheerful for patients. No organised training is at present available, but light work is undertaken. An attempt is made to impress upon patients that they are admitted for the purpose of arresting disease in the lungs, and not merely for amusement or holiday.

CITY HOSPITAL

(DAWBER SANATORIUM PAVILION).

Thirty-five cases remained in at the end of 1919.

Two hundred and twenty-four cases were admitted during the year 120 of these being Discharged Soldiers.

Seventeen cases remained in at the end of 1920.

Two hundred and sixteen cases were discharged improved, and eight died in Hospital.

(FEVER PAVILIONS).

Two hundred and twenty-three cases were under treatment in the City Hospital Pavilions during 1920, nineteen of these cases remaining in from 1919.

Record of admissions during 1920 :—

Diphtheria.	Scarlet Fever.	Measles	Puerperal Fever.	Enteric Fever.
122	65	3	1	4
Mumps.	Encephalitis Lethargica.	Cerebro-Spinal Fever.		Ophthalmia Neonatorum.
1	3	4		1
(Two observation cases— diagnosis negative).				

Of the above cases, 42 were admitted from outside Authorities classified as follows :—

Diphtheria.	Scarlet Fever.	Measles.	Puerperal Fever.	Enteric Fever.	Mumps.	Cerebro-Spinal Fever.
23	10	1	1	4	1	2

During the year a scheme was brought forward by the Council for the approval of the Ministry of Health to provide for the heating of the wards and administration block by hot water pipes, and a supply of steam and hot water for cooking and baths.

This scheme ultimately had to be abandoned, and the provision of domestic boilers for hot water supply in the separate wards has been substituted.

The present administration block does not provide all the accommodation required by the extension of the Hospital, and the altered conditions of the nursing service. One porter's lodge has been taken for extra accommodation for the nursing staff.

In common with other hospitals, the expenses of administration have greatly increased as compared with pre-war conditions.

I should like to acknowledge the great assistance given by Miss O'Kane, the Matron, and Dr. Bery, the Resident Medical Officer, in their endeavours to maintain a high standard of efficiency in every department of the Hospital and Sanatorium.

LOCAL ACTS DEALING WITH SANITARY ADMINISTRATION.

Lincoln Waterworks Acts, 1846, 1856, 1871, and 1908.
L.G.B's. Provisional Orders Confirmation (No. 2) Act, 1907.
Lincoln Corporation Act, 1915.

Adoptive Acts—

	Date of coming into operation.
Infectious Diseases (Prevention) Act, 1890 ...	21st Feb., 1891
Public Health Acts Amendment Act, 1890, Parts II., III., IV., and V.	21st Feb., 1891
Notification of Births' Acts, 1907	19th Oct., 1908
Public Health Acts Amendment Act, 1907—	
Part II.	16th Oct., 1909
Sections 79, 80, 81, 85 and 86 of Part VII. ; Part VIII. and Part IX.	30th July, 1915
Parts IV., V. and VI. ; Sections 34, 35, 36, 37, 38, 43, 44, 45, 46, 47, 48, 49, 50 and 51 of Part III., and Sections 92, 93 and 95 of Part X.	24th Sept., 1915

Powers are obtained under the Lincoln Corporation Act for the closure of Sunday Schools by the Medical Officer of Health for the prevention of Infectious Disease, including Measles, Rubella and Whooping Cough. This is an extremely useful provision, although up to the present the Managers of Sunday Schools have complied with any request in this matter.

Under this Act, diseased meat deposited in cold stores is considered as deposited for sale. This is also a useful provision.

Bacteriological and Chemical Analysis.

BACTERIOLOGICAL LABORATORY.

EXAMINED.	Positive.	Negative	Total
Diphtheria (Swabs)	188	664	852
Tuberculosis (Sputum)	70	329	399
Enteric (Widal Test)	1	2	3
Ringworms (Hair)	26	32	58
Other examinations	16	26	42
Totals	301	1,053	1,354

CHEMICAL.

The details of the Analyst's chemical work, under the Sale of Food and Drugs' Acts, has already been given. I would like to point out that in many milk prosecutions the question of warranty makes it extremely difficult to obtain a conviction. In my opinion, the law on this point requires amendment.

Last December two samples of water from wells situated in the newly-added City area were analysed chemically and found to be unsatisfactory. This work is being extended during the present year.

The chemical quality of the City water supply has already been dealt with.

Housing:

I.—GENERAL HOUSING CONDITIONS.

1. In consideration of its size, there is a fair amount of old property in Lincoln which before the War was in many respects unsatisfactory. During the War and after, material and labour for repairs were difficult to obtain, so that many houses have deteriorated in consequence. Although back to back houses are not the rule, many small houses have no through ventilation. 14,612 houses were examined in a housing census taken last year; there were only 269 of these two-room houses and 846 three-room houses. There is still scope for very great improvement in the general housing conditions. The artisan class is rightly beginning to demand a higher minimum in housing conveniences such as a suitable pantry or food store, hot water facilities, a copper for washing, and baths.

2. (a) Extent of shortage.

So many applications for houses were received by the Corporation, and there was such a dearth of accommodation, that it was decided to visit every house in the City, with an annual value of £30 and under, in order to ascertain:—

- (i) The number of houses occupied by two or more families.
- (ii) The position with respect to overcrowding.
- (iii) Correct information of the demand for houses.

The Census was taken during July, 1920, and included the Area which was about to come into the City on 9th November.

The accompanying table gives the details of the Census taken :—

HOUSING CENSUS.

Summary showing by Wards the result of the Housing Census taken between 5th and 24th July, 1920.

WARD.	Number of Houses.	Two Rooms.	Three Rooms.	Four Rooms.	Five Rooms.	Six Rooms.	Over Six Rooms.	No. of Cases of Two Families.	Number desiring Separate Houses.	Number of Empty Houses.	Number (if any) suggesting overcrowding.
Minster	2097	86	152	323	1202	272	62	240	159	5	26
Castle	2077	58	217	737	854	149	62	214	141	5	46
Abbey	2296	72	137	704	1163	148	72	263	190	11	67
Carholme	2328	22	104	420	1113	401	260	248	173	10	13
Park	2559	15	98	458	1764	179	45	306	215	3	10
Witham	1940	12	114	376	1207	164	67	214	157	5	10
Totals	13297	265	822	3018	7303	1321	568	1485	1035	39	172
Foss (added area)	1315	4	24	270	885	95	37	144	108	—	12
Grand Totals...	14612	269	846	3288	8188	1416	605	1629	1143	39	184

NOTE.—Houses over £30 p. a. rental were not canvassed.

It will be seen that there were 184 cases of overcrowding on the basis of three adults per bedroom (two children under 14=one adult).

In 1,529 cases there were two or more families in one house, and of these 1,143 persons stated that they desired separate accommodation.

(b) Measures taken.

To meet the shortage of houses, the Ministry of Munitions have undertaken the erection of 200 houses, of which 136 are completed.

The Lincoln Corporation has completed 86 houses, and a further 148 are in the course of erection.

Bracebridge Urban District Council has undertaken the erection of 38 houses. This scheme is now included with that of the City.

In conclusion, the Swanpool Housing Co-operative Society has erected 113 houses, which are now within the new City Boundary.

It will, therefore, be seen that houses in the course of erection and those completed total 585. During the year in question 159 new houses were brought into assessment in Lincoln, and 36 in the new area, making a total of 194 new houses.

The Corporation, at the time of going to press, is applying to the Ministry of Health for permission to erect 100 additional houses.

3. *Changes in Population.*

Census figures will shortly be available and give exact information with respect to the industrial population. With the revival of trade, the capacity of the large industrial concerns should attract a still larger population. It may be of interest to remember that much of Lincoln's trade was done with Russia, especially as regards agricultural machinery. If this trade was revived in the future, there would be an increase in the local population.

II.—OVERCROWDING.

1. The extent of overcrowding can be gathered from the housing census taken last year, although some families have probably left the city since this was taken. 184 houses were returned as having more than three adults per bedroom (two children under 14=one adult).

2. *Causes.*

The average number of new houses coming into assessment before the War was about 150—200 per annum. During the War this figure dropped to practically nil, and despite the number of males who left the city to serve with the colours the munition work carried on led to an increase rather than decrease in the population, housing conditions became difficult and the number of double families in one house increased in consequence.

3. The overcrowding can only be satisfactorily dealt with by the provision of new houses. Details have already been given of the number in the city. It is also necessary for trade to revive in order that occupiers of the new houses can pay something approaching an economic rent. At present unemployment prevents this.

4. Very little could be done during the year to abate any overcrowding, as it was useless to serve notices on people who had nowhere to go.

III.—FITNESS OF HOUSES.

1. The general standard of houses has already been discussed. The general character of defects found consist mainly in lack of ventilation, dampness and defective sanitary appliances, w.c.'s, etc., and lack of suitable refuse bins.

In some instances these defects are due to lack of proper supervision by owners. In other cases the property owners are themselves in reduced circumstances, their income being derived from the rents, which have not risen in proportion to the expenses of post-war living, and, therefore, it is hard for them to make both ends meet.

In some instances bad tenants have caused defects themselves.

2. *General action taken.*

(a) Under Public Health Acts,

The vast majority of the routine work is done by systematic inspection of the District, and calling the attention of owners of property to the existence of defects which require remedy. Statutory notices are employed as a last resource. The cost of material and labour, and the difficulty in obtaining the former have often led to delay, but it is hoped that these difficulties will be lessened in future.

(b) Housing Acts.

Housing defects are dealt with under the Public Health Acts, but if there is an accumulation of defects which cannot be so remedied an official representation is made to the Council for a Closing Order under the Housing and Town Planning Act. As stated elsewhere an area has been scheduled under the Housing Acts, but pending a scheme being put into operation it is still necessary to deal with urgent defects in this area under the Public Health Acts.

3. I have already discussed the difficulties which face owners in reduced circumstances for the up-keep of their property, and also the question of material and labour. The difficulties have been considerably increased by the lack of repairs executed during the war.

4. *Unhealthy Areas.*

Details are given in the appendix of an area so scheduled by me during the past year.

No scheme has at present been drawn up for dealing with the properties concerned.

5. *Bye-laws relating to "houses let in lodgings," etc.*

There are no bye-laws as to "houses let in lodgings" in the City.

The model Bye-laws have been adopted for tents, vans, sheds, etc., and detailed inspections are made during fair time or other similar periods.

Bye-laws on "houses let in lodgings" might be adopted with advantage in view of the possibility of having to deal with this class of house.

Appendices.**HOUSING CONDITIONS.
STATISTICS.***Year ended 31st December, 1920.***I.—GENERAL.**

(1) Estimated population	...	...	...	...	...	...	67,543
(2) General death-rate 11.5 per 1,000 population	...	...	...	...	...	...	11.5
(3) Death-rate from tuberculosis .72 per 1,000 population	...	...	...	...	...	...	.72
(4) Infantile Mortality 79.0 per 1,000 Births	...	...	...	...	...	...	79.0
(5) Number of dwelling-houses of all classes in old area	14,189						
(5a) ,, ,, ,, ,, new area	1,389						
						—————	15,578
(6) Number of working-class dwelling-houses	...	...	...	...	...	...	14,612
(7) Number of new working-class houses erected in old area	153						
(7a) ,, ,, ,, ,, new area	36					—————	194

II.—UNFIT DWELLING-HOUSES.**1.—INSPECTION.**

(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	...	...	...	...	...	...	4,500
(2) Number of dwelling-houses which were inspected and recorded under the Housing (Inspection of District) Regulations, 1910							423
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation							3

2.—REMEDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	505
---	-----	-----	-----	-----	-----	-----	-----	-----

3.—ACTION UNDER STATUTORY POWERS.

(A) Proceedings under Section 28 of the Housing, Town Planning, &c., Act, 1919.								
(1) Number of dwelling-houses in respect of which notices were served requiring repairs	...	...	...	...	...	...	...	0
(2) Number of dwelling-houses which were rendered fit:—								
(a) by owners	...	...	...	...	...	...	...	0
(b) by Local Authority in default of owners	...	...	...	...	...	...	...	0
(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close	...	...	...	...	...	...	...	0
(B) Proceedings under Public Health Acts.								
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	...	...	...	...	...	...	...	534
(2) Number of dwelling-houses in which defects were remedied:								
(a) by owners	...	...	...	...	...	...	...	505
(b) by Local Authority in default of owners	...	...	...	...	...	...	...	0
(C) Proceedings under Sections 17 and 18 of the Housing, Town Planning, &c., Act, 1909.								

Appendices—*continued*.

(1) Number of representations made with a view to the making of Closing Orders	...	...	...	...	...	...	...	0
(2) Number of dwelling-houses in respect of which Closing Orders were made	...	...	...	...	...	...	...	3
(3) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit	...	...	...	...	...	...	...	0
(4) Number of dwelling-houses in respect of which Demolition Orders were made	...	...	...	...	...	...	...	0
(5) Numbers of dwelling-houses demolished in pursuance of Demolition Orders	...	...	...	...	...	...	...	0

III.—UNHEALTHY AREAS.

Areas represented to the Local Authority with a view to Improvement Schemes under (a) Part I., or (b) Part II., of the Act of 1890:—

(1) Name of area	...	...	...	...	...	St. Martin Street Area.
(2) Acreage	...	...	...	...	...	3.25
(3) Number of working-class houses in area	...	...	...	...	...	154
(4) Number of working-class persons to be displaced	...	...	...	...	...	843

4.—Number of houses not complying with the building bye-laws erected with consent of Local Authority under Section 25 of the Housing, Town Planning, &c., Act, 1919 17

5.—Staff engaged on housing work with, briefly, the duties of each officer.

J. K. CRAWSHAW, Chief Sanitary Inspector since 8th November, 1920.

C. STREET, Acting Chief Sanitary Inspector to 8th November, 1920.

A. GARNER, Sanitary Inspector.

J. W. HOE, „ „

No Officer has been appointed to deal wholly with Housing. Each Officer acting under the Housing Acts has the usual duties of a Sanitary Inspector to perform

RAINFALL

1920	Total Depth in inches	Greatest Daily Fall		No. of Rainy Days
		Depth	Date	
January	1.57	.53	28th	17
February	1.72	1.18	19th	11
March.. .. .	2.80	1.35	15th	16
April	4.29	.74	20th	28
May	3.04	2.06	29th	14
June	2.46	1.10	13th	9
July	2.41	.51	25th	23
August .. .. .	.88	.39	4th	7
September	1.86	.42	17th	16
October	1.27	.29	31st	9
November .. .. .	.56	.25	27th	6
December	2.08	.37	29th	22
Total, 1920.. ..	24.74			178
Total, 1919.. ..	24.98			181

RAINFALL, 1895 to 1920.

Year	Inches	Year	Inches	Year	Inches	Year	Inches
1895	24.27	1902	21.43	1909	27.24	1916	26.69
1896	26.50	1903	29.53	1910	24.83	1917	20.80
1897	26.29	1904	19.72	1911	18.88	1918	21.12
1898	20.59	1905	18.22	1912	27.76	1919	24.98
1899	26.57	1906	23.53	1913	19.80	1920	24.74
1900	27.01	1907	24.47	1914	20.42		
1901	23.01	1908	20.75	1915	27.52		

Canal Boats Act.

The Inspectors appointed under the above Act are Mr. Street and myself. In each case the remuneration for the office is included in the salary for the post of Sanitary Inspector

During the year 27 boats were re-registered on being transferred to new ownership. The boats were over-hauled and re-measured before the fresh certificates were made out.

The following summary gives all the particulars required by the Ministry of Health.

Number of boats on the register	...	...	80
„ „ Inspections made	...	...	47
„ „ Boats without registration papers			15
„ „ Men on Board	...	...	46
„ „ Women on Board	...	...	5
„ „ Children on Board	...	...	4
Legal proceedings taken	...	...	0
Cases of Infectious Diseases dealt with		...	0
Detention of boats for cleansing	...	...	0
Number of boats on the Register	...	...	80
„ „ „ believed to be available	...		40
„ „ motor-propelled boats registered	...		0

Infringement of the Acts and Regulations with respect to :—

(a) Registration	...	...	...	...	0
(b) Notification of change of master	...	...			0
(c) Certificates	...	...	...	...	0
(d) Marking	...	...	...	...	1
(e) Overcrowding	...	...	...	...	0
(f) Separation of sexes	...	...	...	...	0
(g) Cleanliness	...	...	...	...	1
(h) Ventilation	...	...	...	...	1
(i) Painting	...	...	...	...	1
(j) Provision of water cask	...	...	...		1
(k) Removal of bilge water	...	...	...		0
(l) Notification of Infectious Diseases			...		0
(m) Admission of Inspectors	...	...	...		0

